

WHAT IS CLAIMED IS:

- 1 1. For use in a HVAC system for distributing air through an opening in a horizontal ceiling,  
2 an improved plenum, comprising:

3 a plenum housing having a horizontal bottom, a first and a second vertical end, a  
4 first and a second vertical side, and a sloped top, the bottom having a large diameter  
5 opening therein by which air is passed from the interior of the housing into the opening in  
6 the ceiling, the first end being of substantially larger area than the second end, the first  
7 and second sides being equal trapezoids, the sloped top having an air inlet opening and a  
8 short length flange portion configured to receive an air distribution duct;

9 a hanger bar extending through small diameter openings in each said side wall  
10 and centrally over said large diameter opening in said bottom; and

11 a junction box supported to said hanger bar, the junction box being centered over  
12 said large diameter bottom opening and providing means for supporting a light fixture or  
13 ceiling fan.

- 1 2. An improved plenum according to Claim 1, including:

2 a flexible electrical conduit extending through an opening in one of said side or  
3 end walls and connected to said junction box.

- 1 3. An improved plenum according to Claim 1, including:

2 a diffuser removably affixed to said housing bottom, having an outer  
3 circumferential edge, and having a central opening therein exposing said junction box  
4 and having a plurality of radial vanes extending from adjacent the central opening to  
5 adjacent the circumferential edge.

- 1 4. For use with a HVAC plenum mounted above an opening in a ceiling, a diffuser having  
2 provision for accommodating a ceiling fan or a light fixture, the diffuser comprising:  
3 a generally planar, integral, circular structure formed of thin, rigid material and  
4 having a circumferential outer edge and a central opening dimensioned to accommodate  
5 an electrical junction box, and having a plurality of radially extending fins, each bent to  
6 extend at a common angle to the plane of the structure and a radially extending air slot  
7 opening in conjunction with each fin.
- 1 5. A diffuser for use with a HVAC plenum according to Claim 4 in which said circular  
2 structure is further defined by an integrally formed, concentric circular forwardly  
3 protruding smudge ring circumferentially positioned between said fins and said  
4 circumferential outer edge.
- 1 6. For use with a HVAC plenum according to Claim 4 a circular cap that is removably  
2 attachable to said diffuser and dimensioned so as, when attached to said diffuser, covers  
3 said central opening but leaves said radially extending air slot openings unobstructed.
- 1 7. For use with a HVAC plenum according to Claim 4 a planar damper configured to  
2 removably cover a preselected number of said radially extending air slot openings to  
3 providing means of selectably regulating the total area of exposed radially extending air  
4 slot openings.
- 1 8. A diffuser according to Claim 4 including, in combination with said circular structure a  
2 plurality of bendable metal clips by which the circular structure is removably attachable  
3 to a ceiling panel having the circular opening therein, each clip being affixed at one end

4 to said circular structure adjacent said circumferential outer edge to thereby extend  
5 through the circular opening and each clip being bendable to overlay the ceiling panel.

1 9. A diffuser according to Claim 6 wherein said circular cap has an outer and an inner  
2 surface and including a plurality of at least three legs extending perpendicularly from said  
3 inner surface, each leg having at least one notch therein by which the circular cap may be  
4 spaced a selected distance from said circular structure outer face.